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Your Roll No.....

5185

B.Sc. Prog. Life Science/III Sem. B

Paper—LSPT-304

(Biodiversity I—Microbes)

(Admissions of 2010 and Onwards)

Time : 3 *Hours* *Maximum Marks* : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt *Five* questions in all,

including Q. No. **1** which is compulsory.

1. (A) Fill in the blanks : 1×5=5

(*i*) The integration of a virus into a cellular genome is called .....

(*ii*) ..... help the prokaryotic cells attach to appropriate substrate and exchange genetic information.

(*iii*) Conchoselis stage is seen in the alga .....

(*iv*) Fairy rings are associated with .....

(*v*) ..... is a heteroecious rust fungus.

P.T.O.

(B) Match the contents of Column 'A' with those of Column 'B' : 1×5=5

Column 'A'	Column 'B'
(*i*) Diatomaceous earth	(*a*) Iodine
(*ii*) Fungal cell wall	(*b*) Peptidoglycan
(*iii*) Giant Kelps	(*c*) *Chlorella*
(*iv*) Space alga	(*d*) Frustule
(*v*) Bacterial cell wall	(*e*) Chitin
	(*f*) Polysulphate esters of carbohydrates

(C) Define the following : 1×5=5

(*i*) Akinete

(*ii*) Rhizines

(*iii*) Sclerotium

(*iv*) Ascocarp

(*v*) Transduction.

2. Differentiate between the following : 5×3=15

(*i*) Lytic and Lysogenic cycle.

(*ii*) Eubacteria and Archaebacteria.

(*iii*) Ectomycorrhiza and Endomycorrhiza.

3. Draw neat labelled diagrams of any *three* of the following : 5×3=15

(*i*) VS bisexual conceptacle of *Fucus*.

(*ii*) VS apothecium of Lichen thallus.

(*iii*) TS pileus through gill region in *Agaricus*.

(*iv*) Structure of HIV.

4. Write short notes on any *five* of the following : 5×3=15

(*i*) Chromatic adaptations in red algae

(*ii*) Mycoplasma

(*iii*) Parasexuality in fungi

(*iv*) Chemoautotrophs

(*v*) Conjugation

(*vi*) Sexual reproduction in *Chlamydomonas*.

5. (A) Enumerate the economic importance of the following : 3×3=9

(*i*) Red algae/brown algae

(*ii*) Lichens

(*iii*) Bacteria in food industry.

(B) Write the symptoms, transmission and management of any plant viral disease studied by you. 6

6. (A) *Physarum* is used extensively as an experimental tool. Justify. 3

(B) Comment on the asexual reproduction in *Volvox*. 5

(C) Name a heteroecious rust fungus. Briefly describe its life cycle. 7